

UNCLASSIFIED

RETURN TO
Historical Research Division
ASI/HOA
Maxwell AFB, AL 36112

AFIC STU

REVIEW ON 24 Oct 1992

5 MAY 1983

SPECIAL EVASION AND ESCAPE STUDY

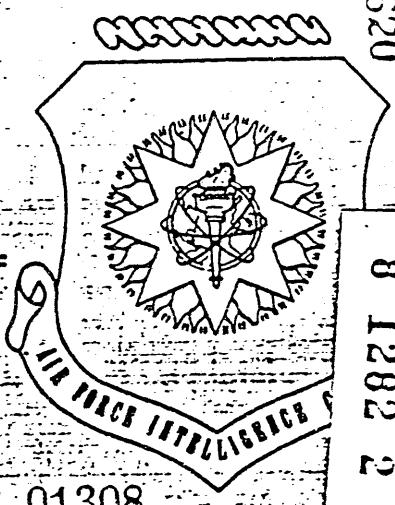
CUBA

S-219-62

24 OCTOBER 1962

00906620
PREPARED BY
THE AIR FORCE INTELLIGENCE CENTER
FOR THE
ASSISTANT CHIEF OF STAFF, INTELLIGENCE, HQ USAF

MICROFILMED BY TIM



63 01308

UNCLASSIFIED

24 Oct 1983

UNCLASSIFIED

R: 913
Aerospace Studies Inst
ATTN: Archives Branch
Maxwell AFB, Alabama 36112

REVIEW ON 24 Oct 1983

5 MAY 1983

SPECIAL EVASION AND ESCAPE
STUDY

CUBA

S-219-62

24 OCTOBER 1962

[REDACTED]

PREPARED BY

AIR FORCE INTELLIGENCE CENTER
FOR THE
ASSISTANT CHIEF OF STAFF, INTELLIGENCE, HQ, USAF

[REDACTED]

UNCLASSIFIED

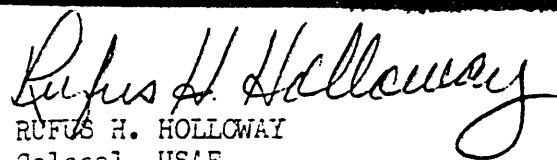
MICROFILMED BY TIM

00906620

8 1202 2

UNCLASSIFIED

FOREWORD



RUFUS H. HOLLOWAY
Colonel, USAF
Acting Commander

UNCLASSIFIED

UNCLASSIFIED

(C) SPECIAL EVASION AND ESCAPE STUDY

CUEA

2. (U) GEOGRAPHY

a. Cuba is bounded on the north by the Gulf of Mexico and the Strait of Florida, the Atlantic Ocean to the Northeast and the Caribbean Sea to the South. Key West, Florida is about 90 miles* distant, the Windward Passage, 50 miles wide, separates Cuba from Haiti to the East, Jamaica lies 35 miles to the South and Yucatan is 130 miles to the west.

b. Cuba is the largest and most westerly island of the Caribbean and has an area of slightly more than 44000 square miles. The island is approximately 750 miles long, east to west, and about 160 miles wide at the broadest point. The Isle of Pines (Isla de Pinos), approximately 50 miles south of the main island of Cuba, accounts for about 1000 square miles of the total area.

c. The coastline of Cuba measures approximately 2,200 miles. The northern coast consists of indented small bays fringed with numerous islets, reefs and shoals. The southern coast is fringed with coral reefs and bordered with large, swampy sectors.

3. (U) TERRAIN AND CLIMATE

a. Terrain

(1) The surface of Cuba is about 60% flat or undulating and 40% mountainous.

(2) The island can be roughly divided into four physiographic regions:

* Distances are stated in nautical miles

UNCLASSIFIED

(a) The Western Low Mountains and Foothills (PINAR DEL RIO Province).

(b) The Eastern Plains and Hills (ORIENTE Province).

(c) The Central Plains and Hills (LA HABANA, MATANZAS, LAS VILLAS and CAMAGUEY Provinces).

(d) The Isle of Pines.

(3) The mountainous parts of ORIENTE Province and the immediate hinterland of most coastal areas may be difficult for cross country movement. The mountains will be difficult especially for off-trail movement because of the rugged terrain and the tropical forest vegetation.

(4) The coastal areas, though having common characteristics, are difficult to traverse because of coral reefs and swamps.

(5) The southern part of the Isle of Pines and the eastern part of the ZAPATA Peninsula (2220N-8135W) are covered with dense thickets growing on rough, spiky, dog-toothed limestone. The thickets, off the trails, are almost impenetrable and the limestone is quite difficult to cross on foot. The southern coasts of PINAR DEL RIO and LA HABANA Provinces, the western part of the ZAPATA Peninsula, and both the northern and southern coasts of CAMAGUEY Province are lined with swamps, marshes, and almost impenetrable mangroves. The rocky and stone lands of the northern cayos (CAYS) and the north coasts of LA HABANA and MATANZAS Provinces are traversable but still difficult.

b. Climate

(1) Notwithstanding the occurrence of tropical storms and hurricanes, the climate of Cuba will present few serious problems to an evader. It is dominated by easterly trade winds with an average speed of 10 to 15 knots.

(2) The temperatures and humidities are high, but the easterly trade winds help to alleviate these conditions. The mean daily temperatures are mostly in the low 70's in January and the low 80's in July or August. The mean daily maximum temperature is 92°F. Freezing temperatures occasionally occur in the higher mountains of Oriente Province. However, no freezing temperatures have ever been recorded in the inhabited areas.

(3) Precipitation throughout Cuba varies seasonally and regionally. The western part of Cuba and the Isle of Pines receive as much as 70" of rain annually. The peak rainfall occurs during late May and early June and during September and October. From May to October there is an average of 6 inches of rain per month.

(4) Tropical storms (including hurricanes) may occur during any month, but hurricanes prevail generally from June through October;

the majority (more than half) of all storms are in September and October. The western part of Cuba is more affected by storms than the rest of Cuba. Excessive rainfall associated with these storms causes overflowing of streams and flooding of lowlands, thus creating conditions which adversely affect an evader's travel.

(5) Ceilings below 1000 feet are infrequent and occur less than four per cent of the time. Ceilings below 3,000 feet are rare in the mornings but increase in late mornings and afternoons as the cumulus clouds build up.

(6) Visibilities range between 7 and 15 miles. A persistent, faint haze is present most of the time, and visibilities over 15 miles are rare. Visibilities less than 6 miles may be expected less than 10 per cent of the time.

UNCLASSIFIED



7. PEOPLE

a. The population of Cuba is estimated at 7,000,000. It is a heterogeneous composition and is distributed unevenly throughout the island. The population growth to a large extent parallels the development of the sugar industry.

b. The racial composition reflects the successive waves of laborers. Negro slaves, Chinese contract laborers, and more recently immigrants from other islands of the Antilles were brought to Cuba to work in the canefields and sugar mills. Fifty seven per cent of the population resides in urban areas. The remaining 43 per cent are fairly well distributed throughout the island except in the sparsely populated mountains.

c. The white population is predominantly of Spanish descent, and the yellow population is almost entirely Chinese. The term "mestizo" is applied to persons of mixed race such as, white-negro, white-yellow, or negro-yellow. Persons of white skin constitute nearly 74 per cent of the total population and are almost evenly divided between urban and rural dwellers. Mestizos and Negroes



UNCLASSIFIED

together comprise 26 per cent of the total population (14 per cent and 12 per cent, respectively). Persons of yellow skin constitute 3/10 of one per cent of the population. Small numbers of Mestizos with marked Indian physical characteristics may be encountered in the rugged mountains. The labor force which comprises over 50 per cent of the population is engaged in agriculture, manufacturing, construction, commerce, transportation, communications and other smaller services.

d. Literacy is relatively high in Cuba. Of the total population 10 years of age or more, 77 per cent are estimated to be literate. Most of the Chinese are literate in their own language (Cantonese dialect). The degree of proficiency in Spanish varies from very poor to very good. Most of the Chinese can speak pidgin Spanish and read Spanish, but cannot write it; a few can read some English.

e. Most people are Roman Catholic, but the Church in Cuba is less influential than in other Latin American countries.

f. Active support of the Castro regime has declined to about 20 per cent of the population but this includes a high proportion of the youth, the Communists, and the new managerial class who occupy positions of authority.

8. COVER AND CONCEALMENT

a. The vegetation of Cuba imposes few limitations on cross-country movement but, for the same reasons, offers few possibilities for concealment. There is a continuous program of cutting for lumber or charcoal, and clearing for agriculture. This, combined with a haphazard reforestation program, limits the arbored concealment.

b. For the purposes of this report, Cuba is divided into regions on the basis of seven types of vegetation, based on the growth characteristics. These types are:

- (1) Savanna, Scrub, and Cutover Land.
- (2) Forest
- (3) Woods
- (4) Marsh and Swamp
- (5) Mangrove
- (6) Scrub
- (7) Marabu.

(a) Savanna vegetation has by far the widest distribution in Cuba. Eighty per cent of the island is made up of

savanna, scrub, and cutover land. Savannas generally support growths of palms or palmettos, but in the clay or gravel savannas of eastern Cuba, the palms are stumpy and scrubby rather than tree-like in growth.

Scrub land is region where the vegetation consists mainly of dwarf or stunted trees; shrubs often are thick and impenetrable, growing in poor soil or sand. Cutover land is land that was once forested and is now cultivated. Much of this land is devoted to the planting of sugarcane with a smaller portion reserved for corn.

(b) Forests are designated as such when the crowns of the trees touch or overlap. The eastern end of the island, the Sierra Maestra, the Eastern Zapata Swamps, the western tip of Cuba and the southern third of the Isle of Pines are forested.

(c) Woods are defined as those regions in which neither the crowns nor lower branches of the trees touch or overlap. Most of the woods in Cuba are the remnants of cutover or high-graded forests. (High-grading is the practice of felling the biggest and most valuable trees.) Woods are found in the Pinar del Rio Province, on the foothills of the mountains in the Oriente Province, in the northern third of the Isle of Pines, in central Cuba, and in the Trinidad Mountains.

(d) The swamps and marshes in Cuba are located near the coast. They contain areas of slight elevation, called cavos that are three or more feet higher than the surrounding surface. The cavos are unusually dry in their highest parts and contain trees.

(e) Mangrove

About six per cent of Cuba is covered by mangrove which is usually found in patches along the coasts and, to a degree,

in marshy river locations. The patches are separated or occasionally dissected by streams which lead to dry land. Since most mangrove has its roots in water, it usually must be approached by small boat.

(f) Xerophytic Scrub

Approximately a third of the total coastal area of the country is covered with xerophytic scrub. This is a desert scrub and individual plants are either cactus or leathery-leaved and widely spaced. Though this type of vegetation thrives in regions not deficient in rainfall, the high porosity of the soil makes it a type of desert.

(g) Marabu

Marabu, consisting mostly of bushy, thorn trees are found throughout Cuba.

9. (U) SUBSISTENCE

a. Food is not overly abundant in Cuba; however, the evader should have little difficulty in subsisting. The country is fairly heavily populated and agriculture is one of the most important pursuits.

b. The main cultivated crops suitable for subsistence are sugarcane, tropical fruits, winter vegetables, and avacados. The main crops consumed domestically include, rice, corn, beans, peanuts, sweet potatoes, yams, yuca (manioc), malanga (lily roots), potatoes, squash, tomatoes and citrus fruits.

c. Fruits, abound both in a semiwild and cultivated state. Grapefruit, pineapple, bananas, papaya, guava products, mango, coconut, tamarind, maney, anon, zapote, and carmito are tropical fruits consumed locally.

d. Over 450 types of edible fish abound in Cuban waters.

e. Small game and many species of birds roam the countryside.

f. Ample drinking water is available, but should be treated prior to drinking. Caution should be exercised when preparing certain plants or other types of wild subsistence.

(1) The roots of the pokeweed are poisonous at all times, but the leaves of the poke and the tender young shoots can be eaten as a cooked vegetable. The juicy berries (purple-black) are bitter and may be toxic, but they are palatable when cooked.

(2) The milky sap from the unripe papaya fruit will cause intense pain and temporary, or even permanent, blindness if it gets into the eyes.

UNCLASSIFIED

(3) All yams should be cooked prior to eating because of the irritant properties of the raw tuber. The tubers of yam bean plant can be eaten raw or else boiled. The raw seeds are poisonous, but the cooked seeds and pods are perfectly safe.

(4) Two kinds of manioc are known, bitter and sweet. Both are edible, but the bitter variety is poisonous if eaten uncooked.

UNCLASSIFIED

12. EQUIPMENT KITS

- a. Individual Survival and Evasion Kits should contain:
 - (1) URC-4 radio or other communication equipment.
 - (2) Whistle
 - (3) Snare or roll of wire for small game

UNCLASSIFIED

- (4) Signal mirror
- (5) Telescope
- (6) Waterproofed matches with spark striking device
- (7) Fishing kit
- (8) Appropriate maps
- (9) Compass
- (10) Pocket knife, at least 3 blades
- (11) Small, high quality sharpening stone
- (12) Sewing kit
- (13) Candles
- (14) Contraceptives (for water-proofing purposes)
- (15) Spare woolen socks
- (16) Plastic water bottle
- (17) Two ounce bottle of 12 per cent Rotenone
- (18) Slingshot
- (19) Needle nose-wire cutting pliers
- (20) Small type rations
- (21) Sunglasses

b. Medical Kits should contain:

- (1) Plastic bag
- (2) Ritalin (to prevent sleep and fatigue)
- (3) APC tablets - headache & mild pain
- (4) Codeine $\frac{1}{2}$ gr. tabs 1 doz. for pain or diarrhea
- (5) Bacitracin antibiotic ophthalmic ointment
- (6) Terramycin - for infections
- (7) Terramycin tabs and topical ointment

UNCLASSIFIED

- (8) Water purification tablets
- (9) Tetracaine cintment for burns
- (10) Compress gauze - 2x2's & 4x4's
- (11) Bandages
- (12) Miltown or equanil (tranquilizer) 400 mg. tablets
- (13) Vaseline dressings for burns
- (14) One 2" and one 4" elastic bandage
- (15) Razor blades
- (16) Safety pins
- (17) Soap containing hexachlorophine or phisohex
- (18) Snake bite kit
- (19) Chapstick
- (20) Mosquitone stick
- (21) Sunburn cream
- (22) Any other personally needed medicines

32

³²
SECRET